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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/511,408	02/23/2000	Toshihiro Sasai	80959	3948

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EXAMINER	
YODER III, CHRISS S	
ART UNIT	**PAPER NUMBER**
2612	

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/511,408	SASAI ET AL.	
	Examiner	Art Unit	
	Chriss S. Yoder, III	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 July 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 July 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's request for reconsideration of the art rejection of the last Office action is persuasive and, therefore, a new final rejection is being supplied.

Response to Arguments

Applicant's arguments, see pages 7-9, filed 07/12/2004, with respect to the rejection(s)of claim(s) 1 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Sawanobori et al.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-3 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Sawanobori et al. (US Patent # 5,936,668).

2. In regard to claim 1, note Sawanobori discloses the use of an electronic camera apparatus with the capability of correcting luminance balance in an image signal read out from an image sensing element (column 1, lines 4-15), said image signal representing a color image constructed by a plurality of pixels and generating a desired

image from the image signal (column 1, lines 4-15; the CCD picks up the image to be generated), comprising a luminance correction section coupled at the output of the image sensing element (column 5, lines 50-55) and operative, on individual units of raw colors of said pixels (column 5, lines 50-61), each one of said pixels each being formed from a set of predetermined units of colors and each unit of color having an analog value representing luminance information (column 5, lines 50-52), the luminance information being discrete on a time axis (this is inherent, when each image is captured it is captured independently of the next image, therefore, it is discrete on a time axis), to generate individual correction coefficients for each of said predetermined colors of each said pixel from a plurality of correction coefficients (column 5, lines 50-61; each color has a correction coefficient), correct white balance using corresponding luminance information in the image signal on the basis of each said correction coefficient (column 5, lines 50-61; the correction coefficients are used to correct the image to be output), and output a new image signal used for image generation (column 5, lines 62-64).

3. In regard to claim 2, note Sawanobori discloses that the luminance correction section is connected in series with the image signal (figure 6: the luminance correction section, 41-44, are located in series with the image signal; the image signal is sent from CCD 15 to the display 13).

4. In regard to claim 3, note Sawanobori discloses that the luminance correction section comprises a correction control section for sequentially generating a luminance correction amount corresponding to each pixel from the plurality of correction coefficients on the basis of a clock signal synchronized with each luminance information

in the image signal (column 5, lines 50-61; the white balance controlling circuits, 42-44 are controlled by the controller, 20, which is considered to a generate a clock signal), and a luminance correction amplification section for switching a gain in accordance with the luminance correction amount sequentially generated by said correction control section to amplify the input image signal by a gain corresponding to each luminance correction amount in units of luminance information (column 5, lines 50-61; luminance correction amplifiers, 42-44), and outputting the new image signal (column 5, lines 62-64).

5. In regard to claim 5, note Sawanobori discloses that the plurality of correction coefficients are formed from luminance correction amounts in units of predetermined colors assigned to the pixels (column 5, lines 50-61; each pixel is a unit color and the colors are adjusted using the correction coefficients for each color, RGB), and said luminance correction section sequentially selects and uses the luminance correction amounts corresponding to the colors assigned to the pixels as the individual correction coefficients in units of pixels (column 5, lines 50-61; each color is adjusted according the gain set for that pixel).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawanobori et al. (US Patent # 5,936,668) in view of Vogel (US Patent # 5,668,596).

7. In regard to claim 4, note Sawanobori discloses the use of a camera having an image sensing device and a luminance correction section for correcting the luminance information based on the correction coefficients as claimed in claim 1. Therefore, it can be seen that the Sawanobori reference lacks the use of a luminance correction section that comprises a first correction control section, a second correction control section, and a luminance correction amplification section for setting a synthesized gain as a product of a first gain corresponding to the luminance correction amount sequentially generated by said first correction control section and the luminance correction amount sequentially generated by said second correction control section. Vogel discloses that the luminance correction section comprises a first correction control section for sequentially generating a luminance correction amount corresponding to each pixel from a plurality of first correction coefficients on the basis of a clock signal synchronized with each luminance information in the image signal (column 5, lines 55-61; and figure 3: 34; the first correction control section is considered to correct white balance, and in order for the device to operate the white balancing properly there is a clock that is inherent), a second correction control section for sequentially generating a luminance correction amount corresponding to each pixel from a plurality of second correction coefficients on the basis of a clock signal synchronized with each luminance information in the image signal (column 6, lines 11-17; figure 3: 50; the second control section is considered to correct the image using operations known in the art that format the image to be

displayed, and it is implied that there are a plurality of correction coefficients that are controlled by a clock in order for the correction to take place), and a luminance correction amplification section for setting a synthesized gain as a product of a first gain corresponding to the luminance correction amount sequentially generated by said first correction control section and the luminance correction amount sequentially generated by said second correction control section to amplify the input image signal by the synthesized gain corresponding to each luminance correction amount in units of luminance information (figure 3: 34 and 50; the synthesized gain that is a product of the first and second correction amount is inherently present because they are both used together in order to adjust the image to be output), and outputting the new image signal (figure 3:17; the image is output to a display). Vogel teaches that the use of a luminance correction section that comprises a first correction control section, a second correction control section, and a luminance correction amplification section for setting a synthesized gain as a product of a first gain corresponding to the luminance correction amount sequentially generated by said first correction control section and the luminance correction amount sequentially generated by said second correction control section is preferred in order to format the image to a format that is suitable for display (column 6, lines 10-17). Therefore, it would have been obvious to one of ordinary skill in the art to modify the Sawanobori device to include a first and second correction control section as suggested by Vogel.

8. Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawanobori et al. (US Patent # 5,936,668) in view of Sakaguchi (US Patent # 5,534,916).

9. In regard to claim 6, note Sawanobori discloses the use of a camera having an image sensing device and a luminance correction section for correcting the luminance information based on the correction coefficients as claimed in claim 1. Therefore, it can be seen that the Sawanobori reference lacks the use of correction amounts corresponding to coordinate positions defined by two-dimensional coordinates of the image. Sakaguchi discloses the use of two-dimensional coordinates within the image to generate the correction amount (column 2, lines 58-60; column 3, lines 26-29;and figure 3). Sakaguchi teaches that the use of two-dimensional coordinates in order to get correction amounts is preferred in order to correct problems of shading created by the lens (column 1, lines 24-28). Therefore, it would have been obvious to one of ordinary skill to modify the Sawanobori device to use two-dimensional coordinates within the image to generate the correction amount in order to correct problems of shading created by the lens.

10. In regard to claim 7, note Sawanobori discloses the use of a camera having an image sensing device and a luminance correction section for correcting the luminance information based on the correction coefficients as claimed in claim 1. Therefore, it can be seen that the Sawanobori reference lacks the use of correction amounts corresponding to coordinate regions defined by two-dimensional coordinates of the image. Sakaguchi discloses the use of two-dimensional coordinates within the image to

generate the correction amount (column 2, lines 58-60; column 3, lines 26-29;and figure 3). Sakaguchi teaches that the use of two-dimensional coordinates in order to get correction amounts is preferred in order to correct problems of shading created by the lens (column 1, lines 24-28). Therefore, it would have been obvious to one of ordinary skill to modify the Sawanobori device to use two-dimensional coordinates within the image to generate the correction amount in order to correct problems of shading created by the lens.

11. In regard to claim 8, note Sawanobori discloses the use of a camera having an image sensing device and a luminance correction section for correcting the luminance information based on the correction coefficients as claimed in claim 1. Therefore, it can be seen that the Sawanobori reference lacks the use of correction amounts representing two correction distribution characteristics changing in axial directions of two coordinate axes that form the two-dimensional coordinates of the image. Sakaguchi discloses the use of two-dimensional coordinates within the image to generate the correction amount (column 2, lines 58-60; column 3, lines 26-29;and figure 3), and it is inherent that the correction amounts represent two correction distribution characteristics changing in axial directions because the correction amount is dependent on the pixel position. Sakaguchi teaches that the use of two-dimensional coordinates in order to get correction amounts is preferred in order to correct problems of shading created by the lens(column 1, lines 24-28) . Therefore, it would have been obvious to one of ordinary skill to modify the Sawanobori device to use two-dimensional

coordinates within the image to generate the correction amount in order to correct problems of shading created by the lens.

12. In regard to claim 9, note Sawanobori discloses the use of a camera having an image sensing device and a luminance correction section for correcting the luminance information based on the correction coefficients as claimed in claim 1. Therefore, it can be seen that the Sawanobori reference lacks the use of correction amounts representing two correction distribution characteristics changing in axial directions of two coordinate axes that form the two-dimensional coordinates of the image. Sakaguchi discloses the use of two-dimensional coordinates within the image to generate the correction amount (column 2, lines 58-60; column 3, lines 26-29;and figure 3), it is inherent that the correction amounts represent two correction distribution characteristics changing in axial directions because the correction amount is dependent on the pixel position, and it is implied that if the two correction amounts are dependent on the position on each axis that if the values increased as it moved outward, the sum of the two would increase the correction amount based on position. Sakaguchi teaches that the use of two-dimensional coordinates in order to get correction amounts is preferred in order to correct problems of shading created by the lens (column 1, lines 24-28). Therefore, it would have been obvious to one of ordinary skill to modify the Sawanobori device to use two-dimensional coordinates within the image to generate the correction amount in order to correct problems of shading created by the lens.

13. In regard to claim 10, note Sawanobori discloses the use of a camera having an image sensing device and a luminance correction section for correcting the luminance

information based on the correction coefficients as claimed in claim 1. Therefore, it can be seen that the Sawanobori reference lacks the use of correction amounts representing two correction distribution characteristics changing in axial directions of two coordinate axes that form the two-dimensional coordinates of the image. Sakaguchi discloses the use of two-dimensional coordinates within the image to generate the correction amount (column 2, lines 58-60; column 3, lines 26-29;and figure 3), it is inherent that the correction amounts represent two correction distribution characteristics changing in axial directions because the correction amount is dependent on the pixel position, and it is implied that if the two correction amounts are dependent on the position on each axis that if the values increased as it moved outward, the product of the two would increase the correction amount based on position. Sakaguchi teaches that the use of two-dimensional coordinates in order to get correction amounts is preferred in order to correct problems of shading created by the lens (column 1, lines 24-28). Therefore, it would have been obvious to one of ordinary skill to modify the Sawanobori device to use two-dimensional coordinates within the image to generate the correction amount in order to correct problems of shading created by the lens.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chriss S. Yoder, III whose telephone number is (703) 305-0344. The examiner can normally be reached on M-F: 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CSY
November 12, 2004

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